ABSTRACT OF THE DISCLOSURE

The present invention relates to an improved single crystal nickel base superalloy and a process for making same. The single crystal nickel base superalloy has a composition comprising 3 to 12 wt% chromium, up to 3 wt% molybdenum, 3 to 10 wt% tungsten, up to 5 wt% rhenium, 6 to 12 wt% tantalum, 4 to 7 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon, up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel. The single crystal nickel base superalloy has a microstructure which is pore-free and eutectic $\gamma - \gamma'$ free and which has a gamma prime morphology with a bimodal γ' distribution.